SMALL | SMART | CONECTED™

CDB / PDB / PSB Series Programming

August 2018

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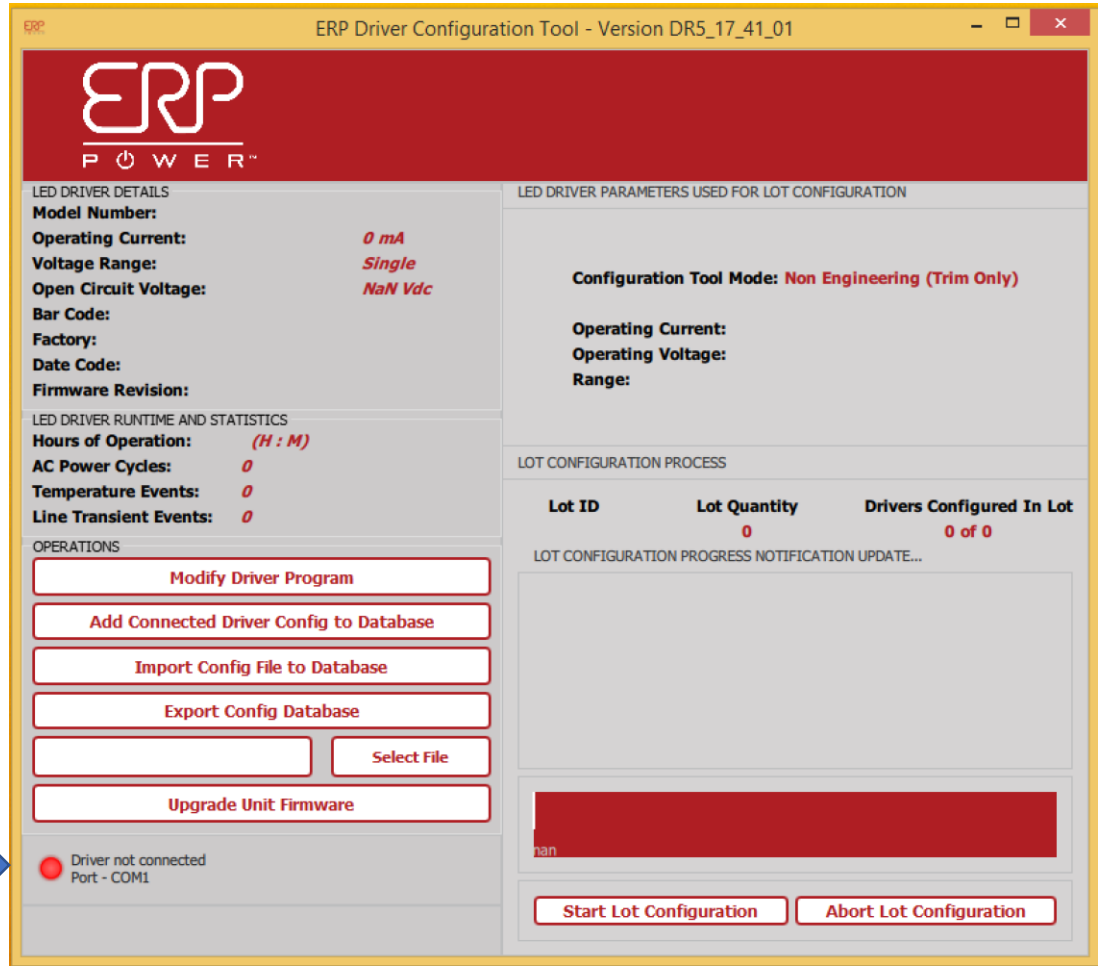
LED Driver Programming Basics : 101

- Install Programming Software GUI
  - USB Drivers
  - DirectX
- Available for download from www.erp-power.com/our-products
- Microsoft Windows Application
  - Apple MAC OSX requires Windows VM
    - Could Use Free VMware, etc…
- Programming Cable (PROG-JACK-USB):
  - Plug USB Side into Your Laptop/PC USB Port
  - Plug Audio Jack Side into programmable LED driver

Programming Main Menu, No Cable or Driver Connected



Red "LED" Indicates No Connections

Programming Main Menu, Cable and Driver Connected

Green "LED" Indicates Connection

Programming Main Menu, Hooked Up to a PDB Series Driver

Programmed Parameters

Interrogated Runtime Statistics

Operations

The ERP driver does not need to be hooked to any external power for programming or checking status.

Production Programming

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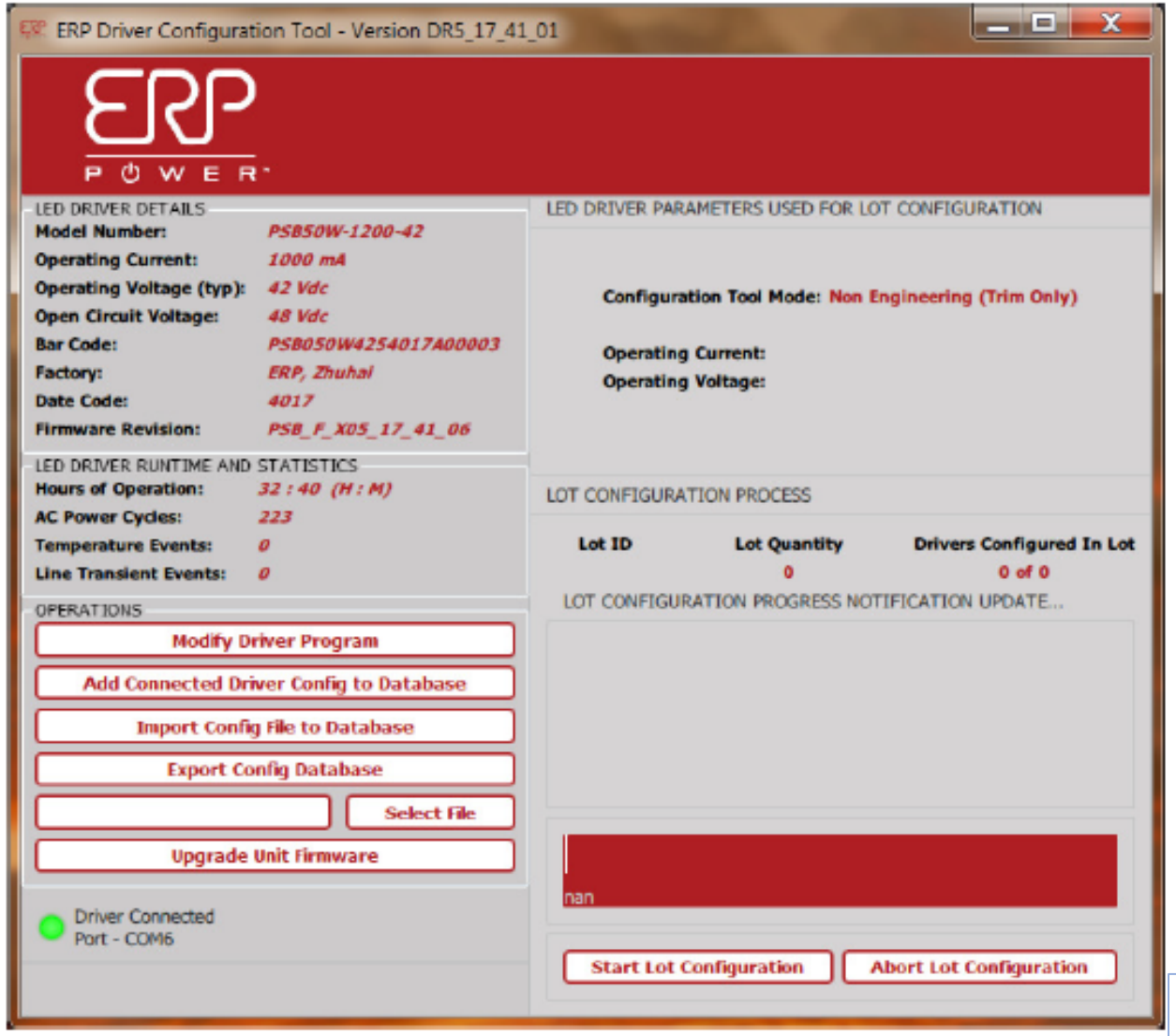


The ERP driver does not need to be hooked to any external power for programming or checking status.

Production Programming

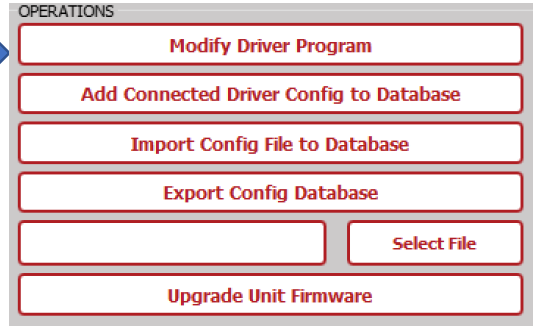
LED Driver Details & LED Driver Runtime and Statistics

- **Model Number:** The ERP model number (or customer SKU) programmed into the unit
- **Operating Current:** The maximum current output (for CC units, this value is configurable)
- **Operating Voltage:** The operating voltage (for CV units, this value is configurable)
- **Open Circuit Voltage:** The maximum voltage output if the driver is not connected to a load
- **Bar Code:** The serial number of the unit
- **Factory:** The factory where the unit was manufactured
- **Date Code**: The date of manufacture (WWYY - week# and year#)
- **Firmware Revision:** The version of firmware inside the driver
- **Hours of Operation:** Total time the supply has been powered (HH:MM), 10-minute intervals
- **AC Power Cycles:** Total number of times the supply has been powered up
- **Temperature Events:** Number of times the supply temperature has exceeded a threshold
  - Temperature thresholds vary by product (~100°C typ.)
- **Line Transient Events:** Cumulative number of line transients seen during operation

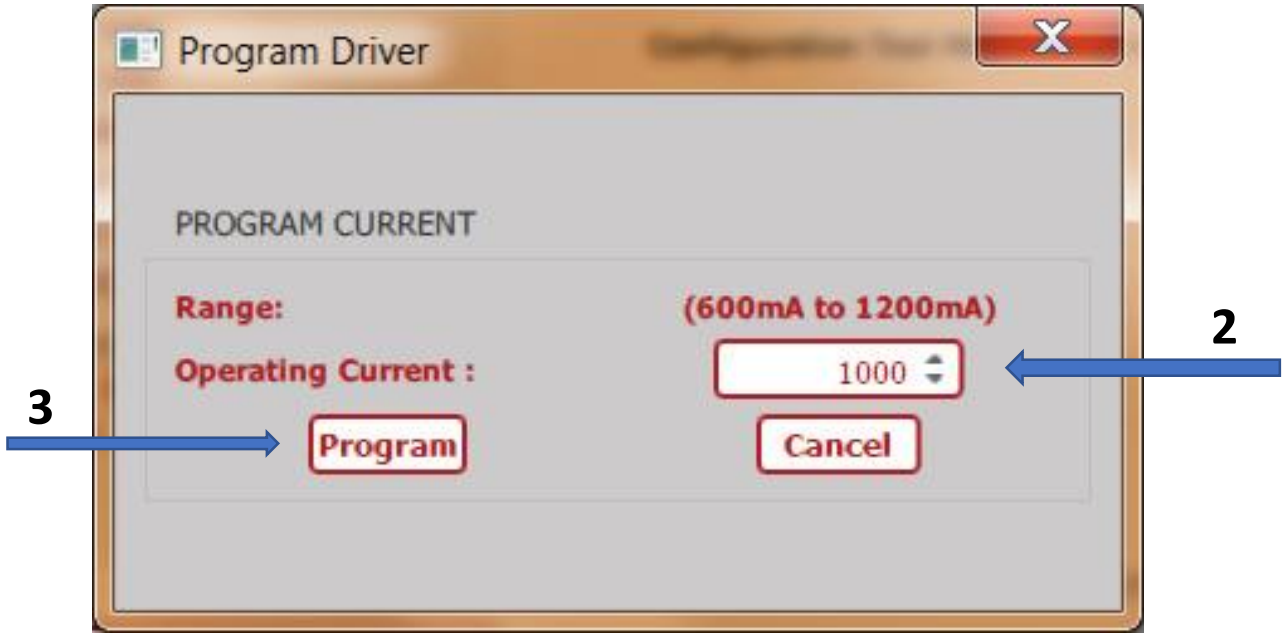
Programming a Driver, 3 Steps, PSB Series

- Press the button labeled "**Modify Driver Program**"

1



- Adjust the Desired Current (PSB Series) or Current and Voltage (PDB Series)
- Pressing the "**Program**" button will write the new Operating Current/Voltage to the driver's memory. Driver status will be updated.



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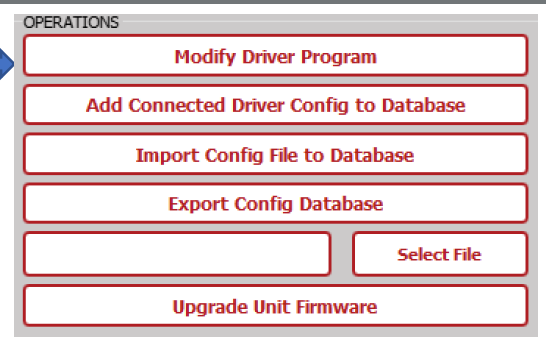

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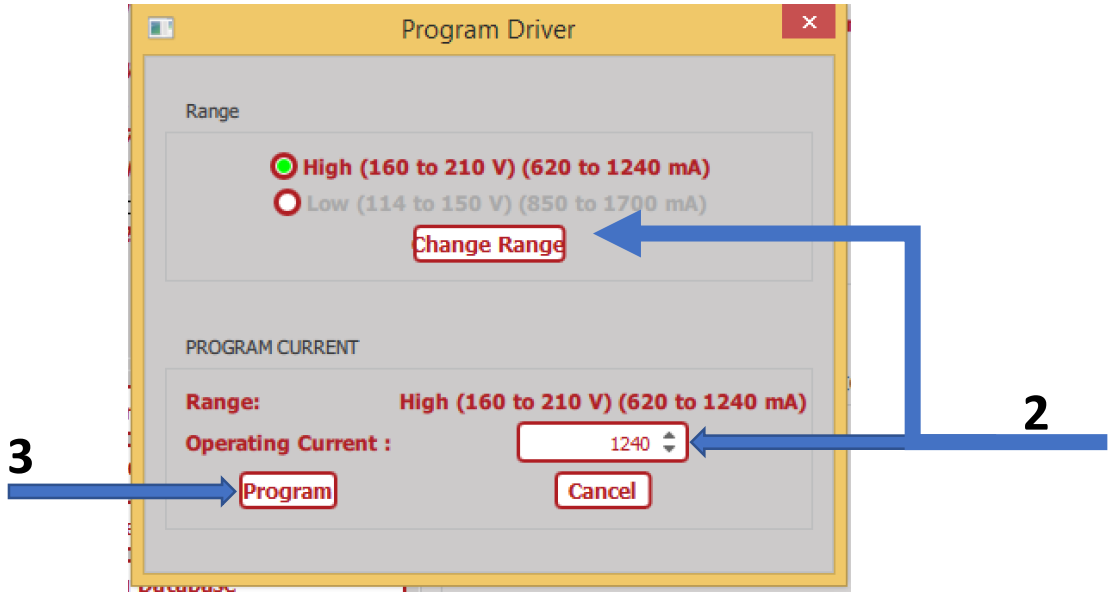
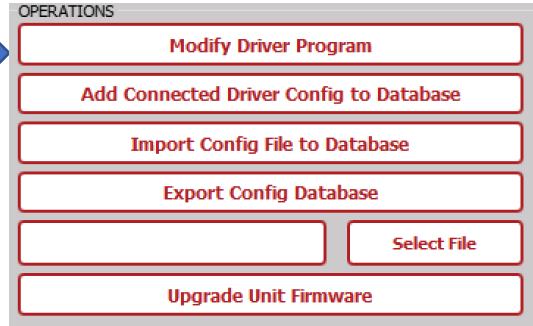
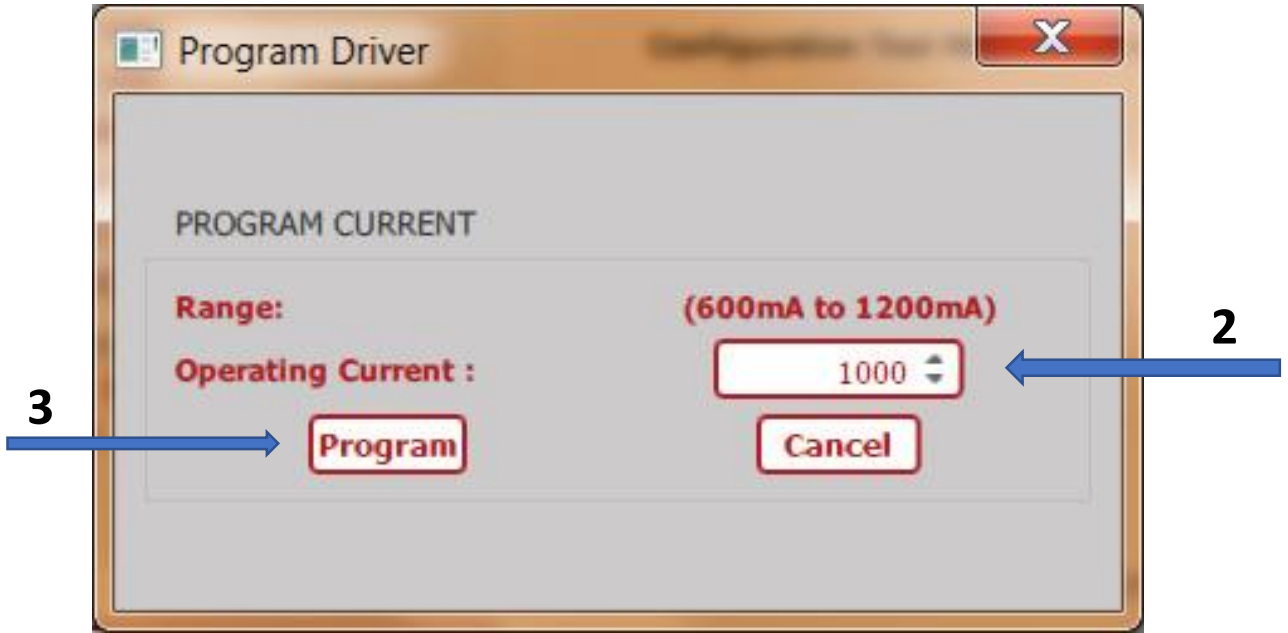


Exercise #2: Programming PSB Series Hands On Exercise:

- **System Requirement**
  - Driving two head track light
  - Each head driven at 1000ma at Worst Case Vf of 20V
- **What PSB Series parts would you use?**
  - Part Number, programmed drive current and Voltage?

1

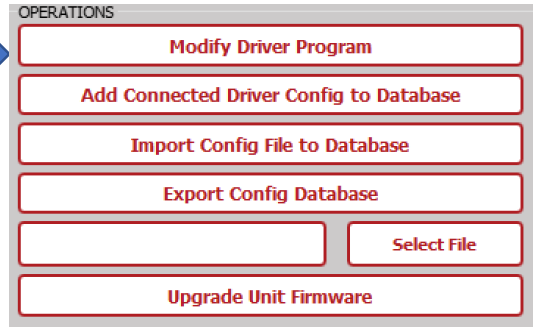


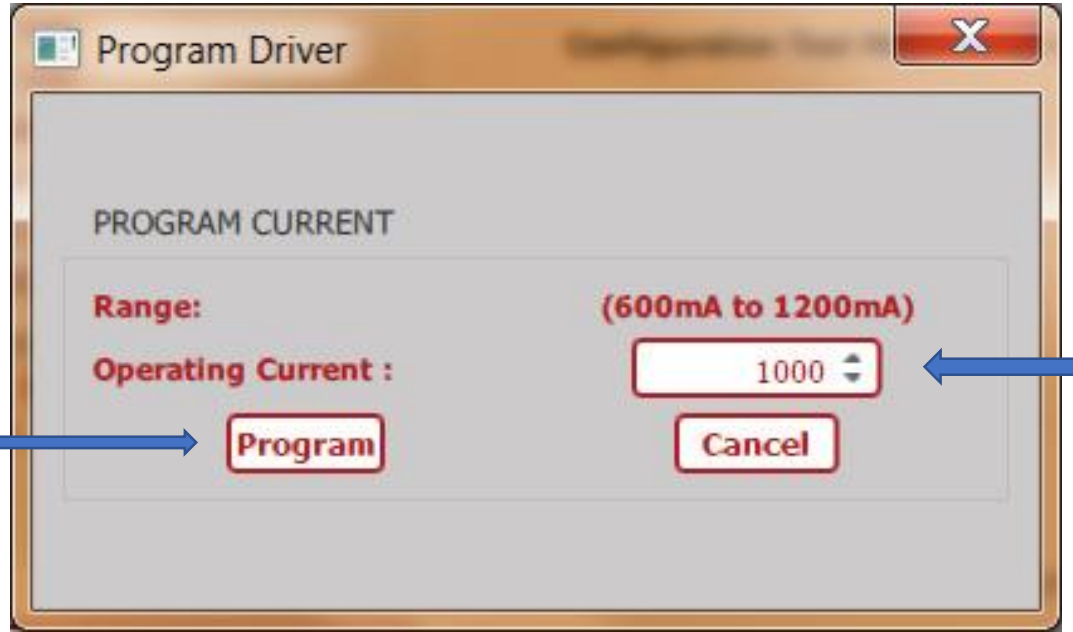


Exercise #2: Solution

- **System Requirement**
  - Driving two head track light
  - Each head driven at 1000ma at Worst Case Vf of 20V
- **What PSB Series product would you use?**
  - Part Number, programmed drive current and Voltage
  - **PSB50W-1200-42, 1000ma, 42V**
  - **Note: Voltage is not Programmable in PSB Series, 42V covers 40V application**

1





3

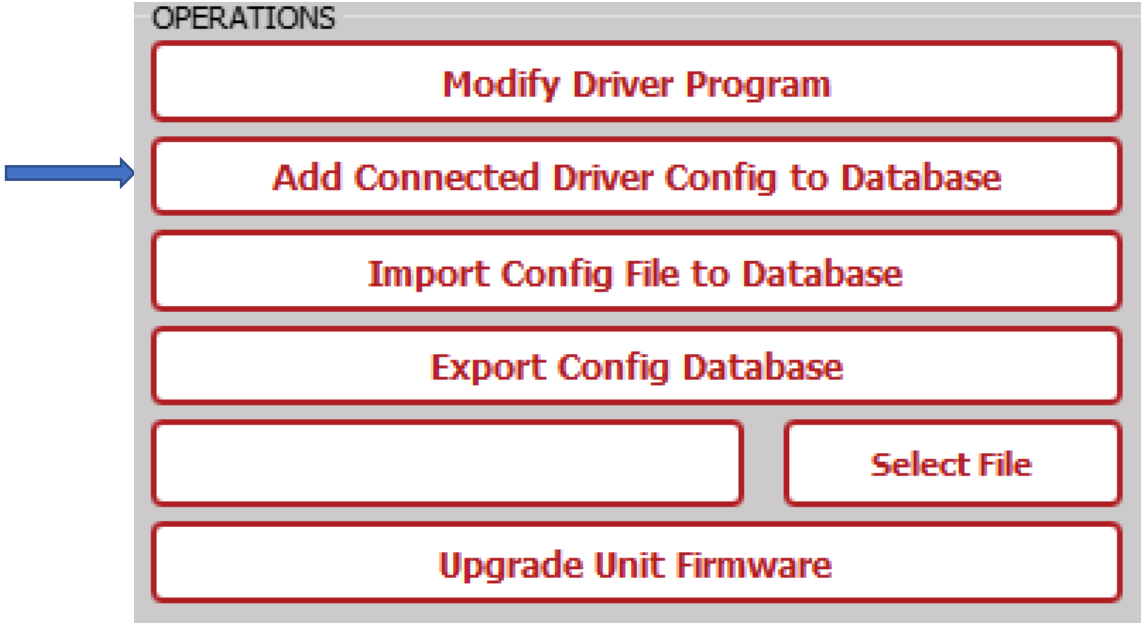
2 (Set to 1000 ma)

Advanced Programming Topics: 102

- Configuring/Programming A Driver
- Database
- Configuration File
- Lot Configuration or Production Programming

Use of Configuration Files

- Each time a Driver is programmed, the configuration can be added to the current database by pressing the button labeled "**Add Connected Driver Config to Database**"

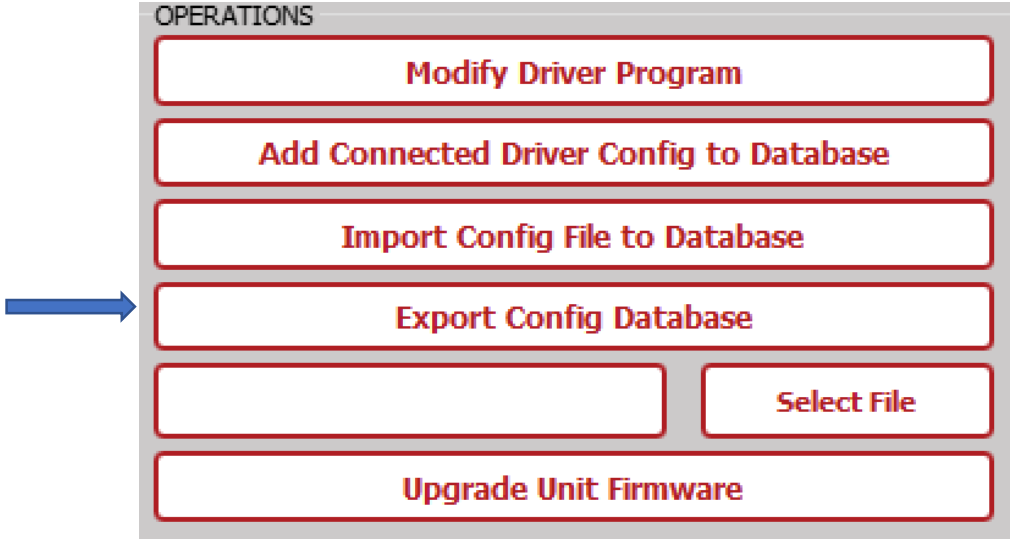


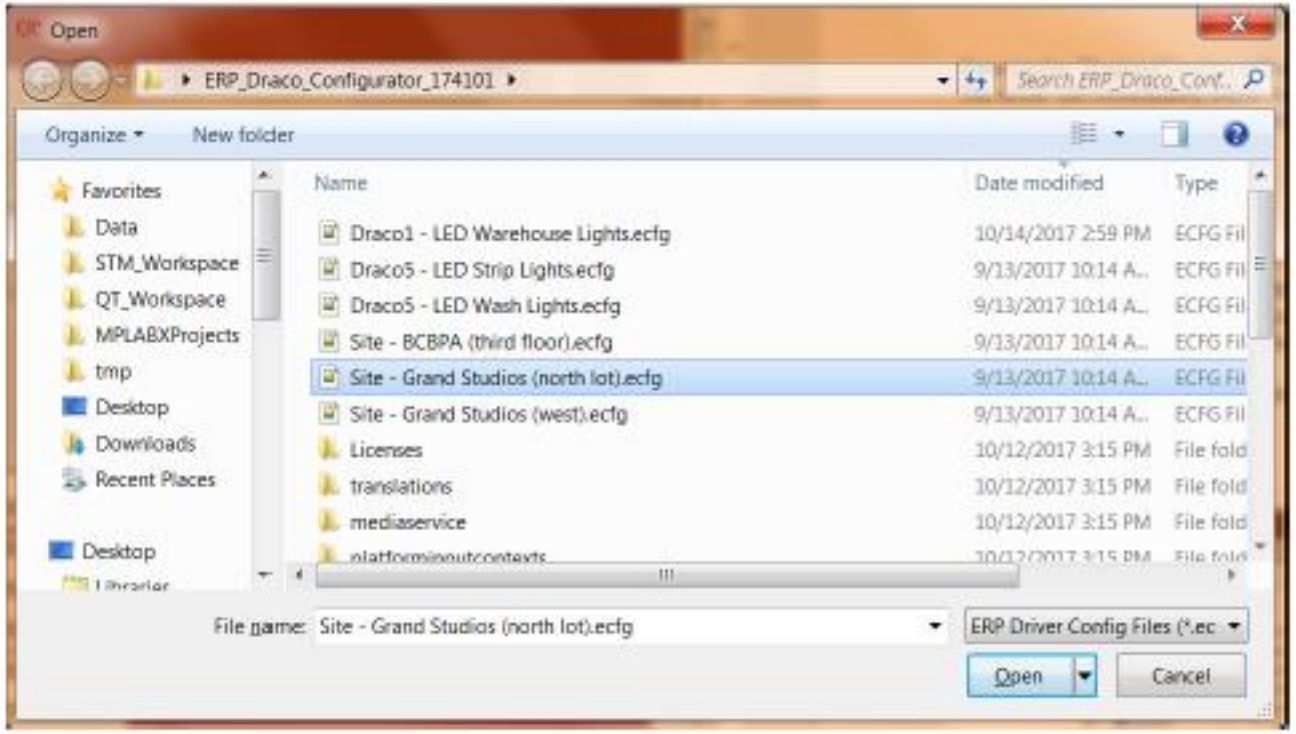
Understanding Database & Configuration File

- Configuration represents a set of Current and Voltage programming parameters
- Each database stored to hard disk can hold hundreds of configurations
- Database is stored in computer temporary memory
  - Cache/DRAM and is Volatile
- Saved File (Configuration file) is stored in a computer permanent memory
  - Hard disk, memory stick and is not Volatile
- These databases can be grouped by product name, site installation, by username or however you would like.

Exporting Database to Configuration File

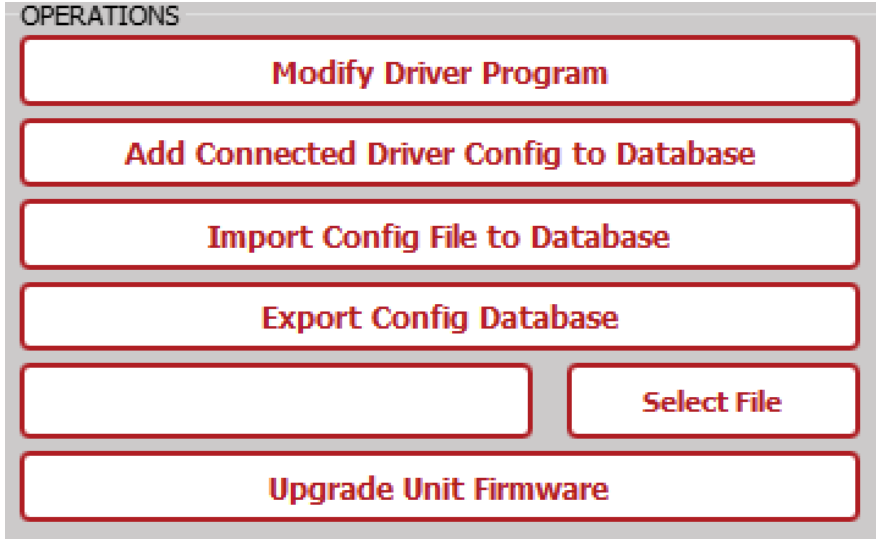
- The database can be stored to hard disk by pressing the button "**Export Config Database**" and selecting the filename.

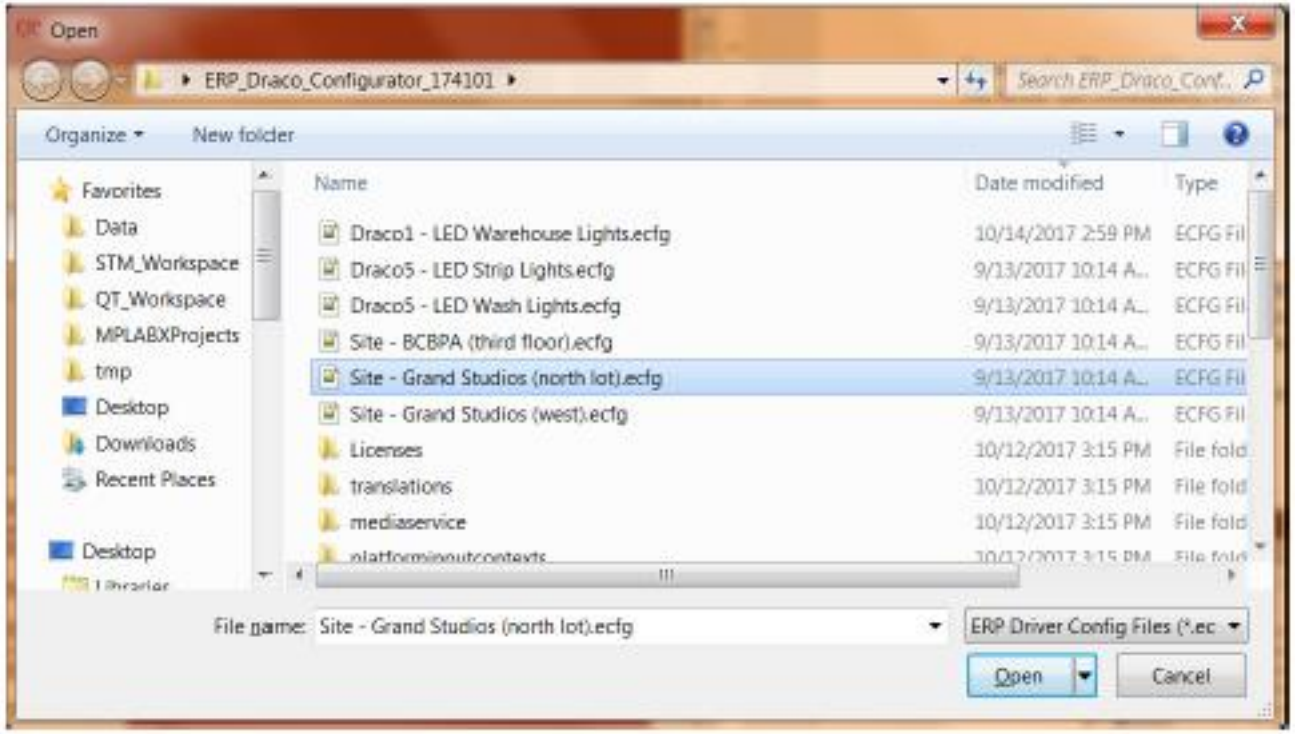




Importing/Loading Configuration File to Database

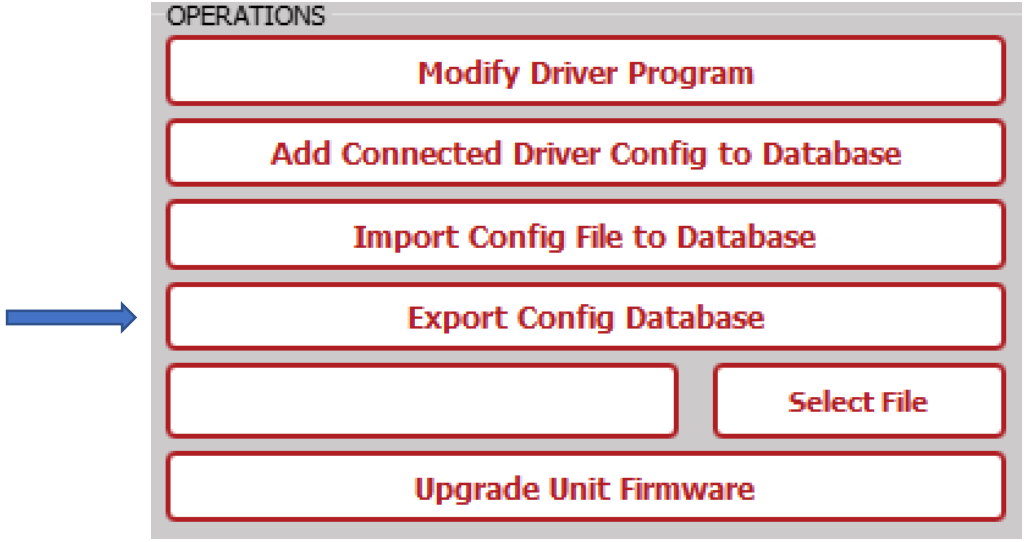
- By pressing "**Import Config File to Database**" button, you select which database is loaded into memory.

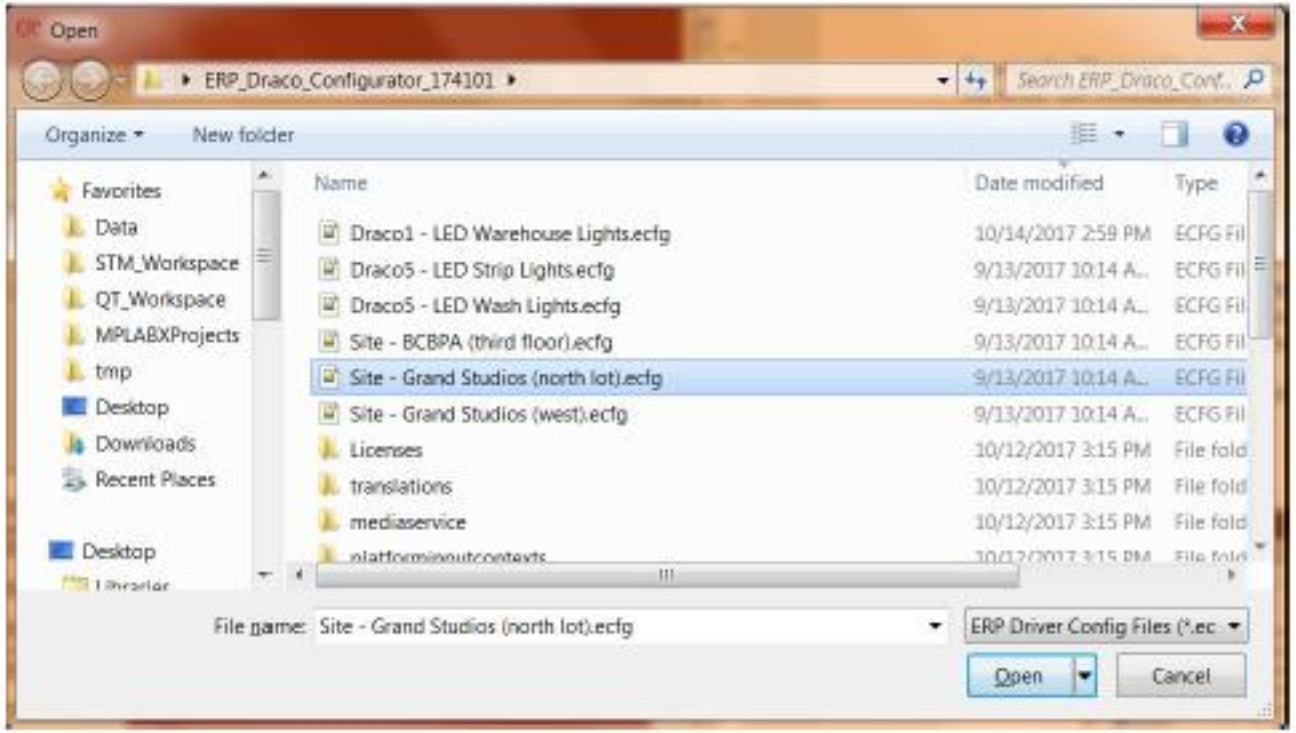




Updating a Configuration File

- By pressing "**Export Config Database**", you can save the current, plus any new added configurations from memory to disk under the current database name, or a new name.



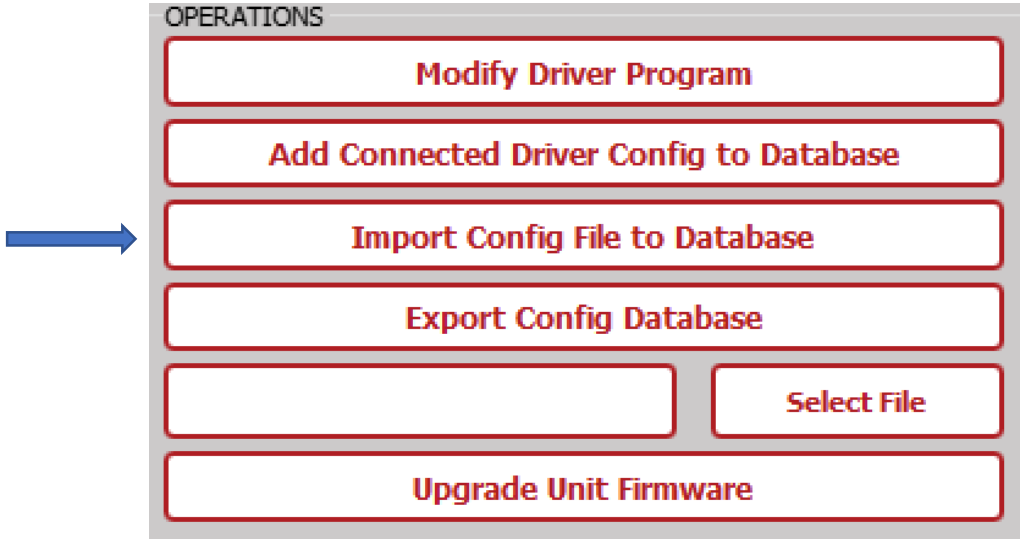


Programming Multiple Drivers

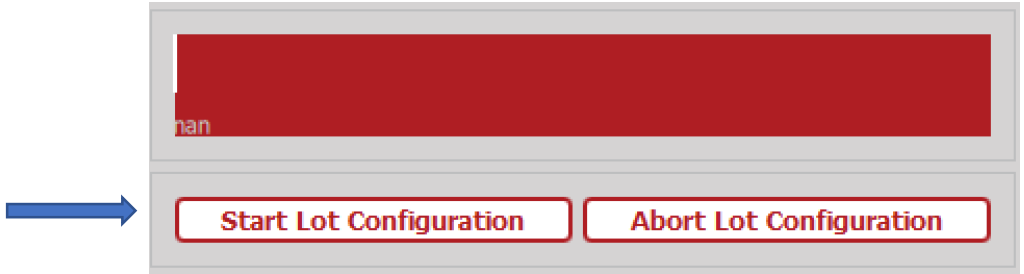
- Programming multiple drivers with the same configuration is called "**Lot Configuration**"
  - A "Lot" is a "Group"
- Typically done during production
- Need to have the configuration database, typically stored in hard disk in a configuration file.
  - Perform "**Import Config File to Database**"
- Previously the below operations should have been performed to save the Config File
  - "**Add Connected Driver Config to Database**"
  - "**Export Config Database**"
- The current configuration from the Database in the memory could be used for Lot Configuration, however it is highly recommended to have the Database saved in a configuration file in a hard disk then Import it and use it for Lot Configuration.

Programming Multiple Drivers Continued

- Import your config file database from disk into memory by pressing "**Import Config File to Database**" button.

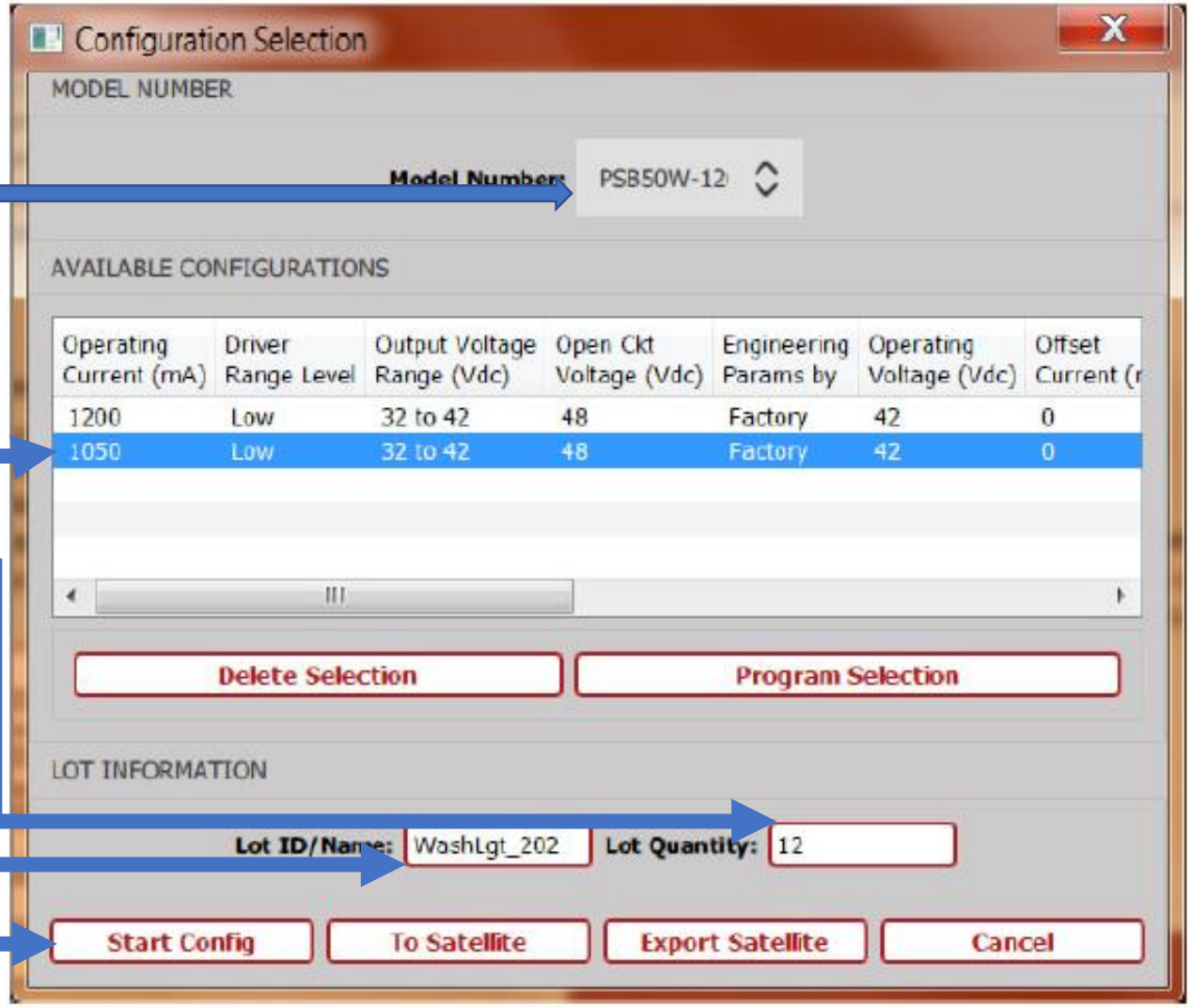


- Press the button in lower right "**Start Lot Configuration**", this will bring up the dialog box shown in the next page



Programming Multiple Drivers Continued

- Select the specific driver model number to filter only those units on the screen (ex. PSB50W-12) **1**
- Enter in the Lot ID/Name to identify this programming sequence (ex. WashLgt_202) **2**
- Enter in the Lot Quantity, how many drivers need to be programmed (i.e. 12) **3**
- Select the configuration you'd like stored on each unit (i.e. 1050 mA) **4**
- Press "**Start Config**" **5**



Programming Multiple Drivers Continued

- You are then taken back to the main window, where the bottom right red-bar will count off each programmed driver.
- You simply plug the PROG-JACK-USB cable into a driver, and it's configured within 1-2 seconds
- You can then plug in the next driver, and the next.
- Configuring a lot of 50 drivers could take less than 2 minutes!
- You may stop the Lot Configuration process by pressing "**Abort Lot Configuration**" button.